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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,078

04/12/2005

Kenneth M. Gainey

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EXAMINER

PHU, SANH D

ART UNIT

PAPER NUMBER

2618

NOTIFICATION DATE

DELIVERY MODE

02/26/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<i>Office Action Summary</i>	Application No.	Applicant(s)	
	10/531,078	GAINEY ET AL.	
	Examiner	Art Unit	
	SANH D. PHU	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2008.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-16, 22-25, 30-35, 39, 42-45 and 50 is/are rejected.
- 7) ☒ Claim(s) 10, 14, 17-21, 26-29, 36-38, 40, 41, 46-49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 11/25/2008.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9, 11-16, 22-25, 30-35, 39, 42-45, 50 are rejected under 35 U.S.C. 102(e) as being anticipated by Karacaoglu et al (US 6,684,058).

Regarding to claim 1, Karacaoglu et al disclose Fig. 2,3, 6 and 10, a frequency translating repeater (100)(fig. 1) for use in a time division duplexing (TDD) radio protocol system (TDMA, CDMA), the frequency translating repeater comprising: a detector circuit (130', antenna, fig. 5) configured to detect if a signal is present on one (ISM band) of two frequency channels (ISM band and PCS band) associated with the frequency translating repeater (see fig. 3); a frequency translator (365a, 345a, 350a, col. 8, lines 22-27) configured to change a frequency channel associated with the signal from the one (ISM band) of the two frequency channels (ISM and PCS) to an other (PCS) of the two frequency channels (ISM and PCS)(fig. 3); a gain control circuit (620)(fig. 6) configure to adjust a gain of the IF signal (Intermediate frequency signal, see col. 12, lines 10-12); and a delay circuit (FEIT, 300 fig. 1) configured to add a delay to the signal

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(signal delay <1 micro second, see FEIT specification) to compensate for a signal detection interval, a gain adjustment interval and a transmitter configuration interval (see fig. 10, FEIT specification).

Regarding to claim 2, Karacaoglu et al disclose the frequency translating repeater wherein the delay circuit includes an analog storage device (analog channel capacity, col. 1, lines 37-40).

Regarding to claim 3, Karacaoglu et al disclose the frequency translating repeater wherein the delay circuit includes at least one surface acoustic wave filter (SAW filter, 630 in fig. 6) configured for one or more of: analog signal storage and channel selection (analog channel capacity, col. 1, lines 37-40).

Regarding to claim 4, Karacaoglu et al disclose the frequency translating repeater wherein the detector circuit includes a processor (microcontroller, Abstract and fig. 9).

Regarding to claim 5, Karacaoglu et al disclose the frequency translating repeater wherein the detector circuit further includes an analog detection circuit (analog channel, AMPS, see col. 1, lines 25-41).

Regarding to claim 6, Karacaoglu et al disclose the frequency translating repeater wherein the gain control circuit has one of a gain value and an attenuation value associated therewith (620, fig. 6, col. 12, lines 10-13).

Regarding to claim 7, Karacaoglu et al does not specifically disclose the frequency translating repeater (100, fig. 1) wherein: the detector (130', antenna fig. 5) is further configured to detect received signal strength of the signal, and the gain control

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circuit (620) is configured to use the received signal strength of the signal to adjust the gain of the signal (see fig. 6 and text portion).

Regarding to claim 8, Karacaoglu et al discloses the frequency translating repeater (100) wherein the gain control circuit (620) is further configured to control the gain value the attenuation value (variable attenuation) or both based on a one or more predetermined criteria to achieve a specific signal transmit output power (predefine specific signal PCS between 1850MHz-1990MHz)(fig. 6, col. 12, lines 10-13).

Regarding to claim 9, Karacaoglu et al disclose the frequency translating repeater (100) wherein the one or more predetermined criteria is for modifying the specific signal transmit output power (predefine specific signal PCS between 1850MHz-1990MHz) and includes at least one criterion selected from the group frequency separation (ISM band and PCS band) between a receive frequency and a transmit frequency, a regulatory rule, a temperature, a received power level, a transmit power level, and a detected interference level.

Regarding to claim 11, it is rejected for similar reasons as set forth in claim 1.

Regarding to claim 12, Karacaoglu et al disclose the frequency translating repeater (100) wherein the gain control circuit (620, fig. 6) is further configured to adjust the gain value based at least in part on criteria including which of the one of the two frequency channels the signal is received on, and which of the other of the two frequency channels is changed to.(see fig. 5 and 6, col. 12, lines 10-12)

Regarding to claim 13, Karacaoglu et al disclose the frequency translating repeater (100) wherein the criteria further includes at least one of a regulatory rule for

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transmission, an operating temperature, and frequency separation (ISM and PCS) between receive and transmit frequencies (see fig. 3).

Regarding to claim 15, it is rejected for similar reasons as set forth in claim 1.

Regarding to claim 16, it is rejected for similar reasons as set forth in claim 9.

Regarding to claim 22, it is rejected for similar reasons as set forth in claim 1.

Regarding to claim 23, it is rejected for similar reasons as set forth in claim 2.

Regarding to claim 24, it is rejected for similar reasons as set forth in claim 3.

Regarding to claim 25, it is rejected for similar reasons as set forth in claim 5.

Regarding to claim 30, it is rejected for similar reasons as set forth in claim 1.

Regarding to claims 31, 32 and 33, they are rejected for similar reasons as set forth in claims 8 and 9.

Regarding to claim 34, it is rejected for similar reasons as set forth in claim 1.

Regarding to claim 35, it is rejected for similar reasons as set forth in claim 1.

Regarding to claim 39, Karacaoglu et al disclose a frequency translating repeater (100)(fig. 1) for use in a time division duplexing communication system, the frequency translating repeater comprising: at least two receivers (335a, 335b)capable of receiving transmissions on at least first (ISM band) and second (PCS band) frequency channels (fig. 3); at least one transmitter (325) capable of transmitting on the first frequency channel (PCS band); at least one transmitter (370)capable of transmitting on the second frequency channel (ISM band); a detector circuit configured to detect if a signal is present on one of two frequency channels associated with the frequency translating repeater and for detecting a receive power level of the signal (see claim 1 rejection); a

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frequency translator configured to change a frequency channel associated with the signal from an initial one of the first and second frequency channels to a subsequent one of the first and second frequency channels (see claim 1 rejection); a gain control circuit for adjusting a gain of the signal; a delay circuit configured to add a delay to the signal to compensate for a signal detection interval, a gain adjustment interval and a transmitter configuration interval (see claim 1 rejection); and a microprocessor capable of configuring the first and second frequency channels based on pre-determined parameters stored therein (see fig. 9), wherein configuration of a specific frequency (1850MHz-1990MHz, and 2400-2484MHz) for the first frequency channel (PCS 1850-1990MHz) or the second frequency channel (ISM 2400-2484MHz) or is based on the pre-determined parameters (predefined frequency, ISM or PCS, see fig. 10 and text portion), and the pre-determined parameters include at least one parameter selected from the consisting of regulatory transmitter power limitations, regulatory band emissions limitations, and frequency separation between the first and second frequency channels (ISM or PCS see fig. 10 and text portion).

Regarding to claim 42, it is rejected for similar reasons as set forth in claim 1.

Regarding to claim 43, it is rejected for similar reasons as set forth in claims 1 and 2.

Regarding to claim 44, it is rejected for similar reasons as set forth in claim 3.

Regarding to claim 45, it is rejected for similar reasons as set forth in claim 5.

Regarding to claim 50, it is rejected for similar reasons as set forth in claim 1.

*Allowable Subject Matter*

4. Claims 10, 14, 17-21, 26-29, 36-38, 40, 41, 46-49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

5. Applicant's argument filed on 11/25/2008 render moot. However, claims 1-9, 11-16, 22-25, 30-35, 39, 42-45, 50 are deemed to be still rejected with reasons set forth above in this office action.

*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanh D Phu whose telephone number is (571)272-7857. The examiner can normally be reached on 8:00-16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sanh D. Phu/  
Primary Examiner  
Division 2618